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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,636	12/14/2001	Karl-Heinz Knorzer	401484	9764

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EXAMINER	
MOHANDESI, IRAJ A	
ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,636	KNORZER ET AL.	
	Examiner	Art Unit	
	Iraj A Mohandesi	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,5-9,12 are rejected under 35 U.S.C. 102(b) as being anticipated by, **Sakai US patent 5,619,087.**

Sakai'087 discloses an electric axial machine (Fig. 3,39,160 including an ironless disk shaped rotor (32, Fig. 9, column 8 line 12-25) arranged on a machine shaft (23, Fig.9,column 4,line 51) ,having permanent magnets imbedded in a fiber (32,Fig.9, column 8, line 12-30), and on both side, next to the rotor, stator (11,Fig. 4, column 4,line 1), wherein the permanent magnets are each joined to the surrounding fiber (Fig.9, column 8, line 12-25), so that the permanent magnet and machine shaft ,form a dimensionally stable unit (fig. 3,,9,16) , the permanent magnets are arranged in a circle around the machine shaft and the fiber extend between the permanent magnets over at least 10% o the circle (39,1,Fig. 9 column 8,line 54),the rotor becoming inherently thicker with increasing distance from machine shaft (Fig. 9. the segments become larger),the fiber reinforce plastic comprises an epoxy resin (column 8,line 14),the permanent magnets comprise at least two separate magnet signets next to one another in a circumferential direction (Fig. 9,16),the stator comprises an annular yoke including slots (column 11 line 49 the winding are embedded in recesses *slots* ,) extending

radialy and multiple phases (Fig. 10 shows three phases of W,Y,U), one of the permanent magnets and the slots are transposed in a circumferential direction (Fig.16, the 52-1 ,52-2.. and the 40a),the two stator electrically offsets in relation to one another in a 180 degree (15- and 15-2), the slots of the stator are inherently obliquely relative radii to the shaft as Fig. 5 shoes

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sakai'087** and in view of **Raybould US patent 3,558,950**

Sakai'087 discloses an electric axial machine (Fig. 3,39,160 including an ironless disk shaped rotor (32, Fig. 9, column 8 line 12-25) arranged on a machine shaft (23, Fig.9,column 4,line 51) ,having permanent magnets imbedded in a fiber (32,Fig.9, column 8, line 12-30), and on both side, next to the rotor, stator (11,Fig. 4, column 4,line 1), wherein the permanent magnets are each joined to the surrounding fiber (Fig.9, column 8, line 12-25), so that the permanent magnet and machine shaft ,form a dimensionally stable unit (fig. 3,,9,16) , the permanent magnets are arranged in a circle around the machine shaft and the fiber extend between the permanent magnets over at least 10% o the circle (39,1,Fig. 9 column 8,line 54),the rotor becoming inherently thicker with increasing distance from machine shaft (Fig. 9. the segments become

larger),the fiber reinforce plastic comprises an epoxy resin (column 8,line 14),the permanent magnets comprise at least two separate magnet signets next to one another in a circumferential direction (Fig. 9,16),the stator comprises an annular yoke including slots (column 11 line 49 the winding are embedded in recesses *slots* ,) extending radialy and multiple phases (Fig. 10 shows three phases of W,Y,U), one of the permanent magnets and the slots are transposed in a circumferential direction (Fig.16, the 52-1 ,52-2.. and the 40a),the two stator electrically offsets in relation to one another in a 180 degree (15- and 15-2)How ever **Sakai'087** fail to teach an electrical axial machine ,wherein the rotor has an outer circumferential stiffening band.Raybound'950 discloses an electrical axial machine ,wherein the rotor has an outer circumferential stiffening band (column 1 line 59).

Therefore it would have been obvious to on having ordinary skill in the art at the time the invention was made to combine **Sakai'087** axial motor with a stiffening band for the purpose of absorbing the centrifugal forces.

3. **Claim 4,12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sakai'087** in view of **Raybould US'950** * as applied to claim 1-3 above, and further in view of **Fujjita US patent 4,093,**

Sakai'087, Raybould US'950 combined fail to teach an electric having hall probes for determining magnetic pole position fixed in place.

Fujita '897 an electrical axial machine comprising; a hall probes for determining magnetic pole position fixed in place. (54, 55, Fig 2 colum5, line 65).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify **Sakai'087, Raybould US'950** axial motor with hall probes was taught by **Fujita '897** to detect the position of the rotor poles.

With regards to claims 10,11, no patentable weight has been given to the method of manufacturing of a rotor ,The patenability of a product does not depend of its method of production.

Response to Arguments

4. Applicant's arguments filed 12/11/2002 have been fully considered but they are not persuasive. **Sakai'087** describes clearly in column 8, line 12-25 ,that : the rotor (32) having a shaft and made of molded fiber-reinforcement resin and connected to the shaft (37) so that rotate together and the permanent magnet s (30a's) are attached to the rotor " also see column 11 line 45-46 where **Sakai'087** describes t the magnet are "***imbedded*** ".**Sakai'087**shows very clearly in(Fig.9 cross-section) that the magnets are imbedded. The way the Fig. 9 demonstrate the magnets (30a) they are not located at the surface of the rotor positively they are inside (imbedded) the resin-enforced rotor.

With regards to claims 10,11, no patentable weight has been given to the method of manufacturing of a rotor ,The patenability of a product does not depend of its method of production.

Communication

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is (703)305-3242. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

IM
January 24, 2003

NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800